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ABSTRACT

Three approaches to vocabulary presentation in the second language classroom are described. The examples used are drawn largely from German, Russian, French, Latin, and Greek, but they can be extended to all commonly taught languages, although certain approaches are particularly suited to specific languages. In addition, the goals of a particular course must be taken into consideration when deciding on a particular approach. The "root" approach takes advantage of the natural system found in Indo-European languages which consists of roots, prefixes, and suffixes. The "etymological/mnemonic" approach connects a new item with one already existing in memory on the basis of logical connection, similarity, contrast, or simultaneous occurence. Direct borrowings and loan translations have been found to be very effective within this approach. Finally, the "topical voabulary checklist" approach is an attempt to provide order in vocabulary by grouping semantically related words. Appendices contain a sample of prefix-root matrices and a sample vocabulary checklist. (AM)

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LANGUAGE IN EDUCATION:

THEORY & PRACTICE

8 **New Perspectives on Teaching Vocabulary**

Howard H. Keller

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LANGUAGE IN EDUCATION: THEORY AND PRACTICE

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NEW PERSPECTIVES ON TEACHING VOCABULARY

Overview

It is ironic that one of the most complex and tedious aspects of language learning--vocabulary acquisition--has been given so little emphasis in a wide range of introductory and intermediate level textbooks. Those texts that are based on descriptive linguistics have traditionally concentrated on detailed phonological descriptions and extensive presentations of grammatical rules. Yet most students also need help in learning the 1,000 to 3,000 words presented in beginning or intermediate foreign language courses. When they are overwhelmed by the vocabulary-learning task, they often lose interest altogether in studying the language.

This paper will consider three approaches to vocabulary presentation that have helped many second-language learners acquire and retain new words: (1) the root approach, (2) the etymological/mnemonic approach, and (3) the topical vocabulary checklist. These approaches can be used on a wide variety of levels from elementary school through college or in specialized schools.

The examples given in this paper are drawn largely from German, Russian, French, Latin, and Greek, but they can be extended to all commonly taught languages in the United States. All three approaches have a place in that part of the lesson plan devoted to previewing vocabulary or familiarizing students with a new vocabulary list. Certain approaches, however, are particularly suited to specific languages. For example, a speaker of English would find the root approach helpful in learning French or Spanish, since English, French, and Spanish all use the same root developments borrowed from Latin and Greek. The root approach is especially useful when applied to German or Russian, because these two languages have vast root systems that are built on native Germanic or Slavic root forms. The approach used in vocabulary learning may depend on the goals of the course, e.g., reading vocabulary, speaking/conversational vocabulary, listening comprehension vocabulary, writing/composition vocabulary, or translator's vocabulary.

Reading vocabulary is the largest of these classes. Passive control is often sufficient: students merely need to recognize the foreign

form, not recall or reproduce it. There is no time pressure in the use of reading vocabulary, since students are free to stop at any time and use the dictionary or to "back up" and redo a difficult sentence. Speaking/conversational vocabulary usually constitutes a far smaller class of words than does reading vocabulary. Active control is needed for these words: students must be able to recall an entire corpus of foreign words and form them into sentences.

Listening comprehension vocabulary requires passive control, but the beginning student is nevertheless under pressure in the sense that an interlocutor is not like a tape that can be advanced, halted, slowed, accelerated, or replayed. Active control is needed for writing/composition vocabulary, but students have the luxury of being able to look up words in a dictionary as they need them. Some specific problems in this area, however, involve choice of words, level of style, and use of idioms.

Translator's vocabulary is the most specialized class of vocabulary. Although translation is a special skill not closely related to speaking or reading ability in a language, so many traditional grammar-translation language courses rely so heavily on this skill in teaching and testing that it merits mention here. Translation can involve either active or passive control of vocabulary. It could become an exact science if there were a one-to-one correspondence between the words and ideas of any pair of languages. Because no language can be converted into another without some change in meaning, however, context and connotation play important roles in the vocabulary of translation.

The Root Approach

Until very recently, studies of word family systems in foreign languages were limited to theoretical discourses or to reserve-shelf reference works. Although most teachers of German, Russian, Latin, or Greek are aware that extensive word families exist in these languages, few instructors allot them more than a cursory mention in their classrooms.

The root approach to vocabulary learning profits from a remarkable economy in Indo-European languages, where some 50 to 80 productive roots, combined with 40 to 50 prefixes and prefix combinations, form several thousand words of relatively high frequency. If the 80 or so most productive roots of these languages were placed on one axis and the 30 prefixes on the other, a matrix could be created that would resemble a multiplication table. It would then be possible to place a checkmark at every junction of prefix and root that represented an actual word in the language in question. (See Appendix A for representative prefix-root matrices from German and Russian.)

It should be noted that this phenomenon is not unique to the Indo-European languages. Chinese, for example, has thousands of words based on a combination of a radical plus a qualifier. In Chinese, a fixed inventory of 212 radicals signify such basic or common concepts as 'big,' 'little,' 'clothing,' 'wind,' 'hair,' and so forth. Words are formed by combining two radicals that have a slight metaphoric relationship to the item to be named. For example, the abstract Chinese concept 'size' is actually the combination of the two radicals 'big + little.' 'Overcoat' is 'big + clothing'; 'typhoon' is 'big + wind'; 'fur' is 'hair + skin'; 'sweater' is 'hair + clothing'; and the abstract concept 'conceited' is 'self + big.'[1]

The combination of a fixed inventory of words or word-particles serves a vital purpose: it provides verbal counters or signs for every item in the real world. These extralinguistic items may be either concrete objects or abstract concepts. The number of these objects and concepts is vast, and the number of linguistic signs available to identify them is relatively small, due to the limitations of the human memory and the small number of underlying phonemes and acceptable phoneme combinations in each language. Vocabulary growth, then, is often geometric rather than arithmetic in nature.

All Indo-European languages share the feature of prefix-root combinations. In standard contemporary German and Russian, which have extensively developed root systems, many recognizable prefixes and root words can also be used alone. Although Ancient Greek and Latin are no longer commonly spoken, they, too, have a rich and productive system of recognizable root developments. French, Spanish, and English differ from German and Russian in that they do not generally use native monosyllabic words as roots but rather borrow entire root developments almost intact from Latin or Greek. The following discussion of the root approach will be restricted to German and Russian, but at the end of this section some applications to the English, French, and Spanish root systems will be mentioned as well.

Students of Russian or German who wish to master the 6,000 to 10,000 words required for everyday communication in these languages have a large task in front of them. Two years of college Russian will give them about 1,500 to 2,000 words; they will then be left to their own devices to acquire the remaining 4,500 to 8,000 words. Two years of college German will provide students with approximately 3,000 to 3,500 words (due to the many English-German cognates), but they must still significantly expand their vocabulary by supplementary reading. Students who are voracious readers will assimilate words at a rapid pace, but they are often discouraged by the speed with which they forget words after they have looked them up in the dictionary.

Sooner or later students recognize the need for a system. It is at this point that the inherent root structure of Russian or German

can become an aid. Approximately 45 percent of the most frequently used 10,000 words of Russian belong to 500 productive families of that language. The task of learning some 2,000 words, then, can be reduced to acquiring a familiarity with 200 roots and 20 prefixes. (We must remember that every junction of prefix and root does not automatically result in a word. Some roots have as many as 20 prefix correspondences; the average root has ten; and several hundred roots have between three and six prefixes each.)

Students taking advantage of this natural system in German or Russian can use several reference works on root structures as a checklist to measure their progress.[2] The patterns themselves will serve as an encouragement, and students will want to complete their knowledge of a family after they have checked off the members with which they are already familiar. For example, if German students see that they already know the more frequent derivatives of TRAG (carry) such as Auftrag (order, assignment), Betrag (sum, total), Beitrag (contribution), Vertrag (contract), and Vortrag (lecture), they will be encouraged to complete the pattern by learning Antrag (offer, application), nachträglich (additional), Übertragung (transfer, transmission).

Students already familiar with the meanings of prefixes and roots can often guess the meaning of a new prefix-root combination. In Russian, for example, if they know obmotat' (wind around) and peremotat' (rewind), they can guess the meaning of razmotat' (unwind) and namotat' (wind up). If they know mesto (place), peremestit' (move, transfer) and vmestit' (contain, hold), they will have no trouble learning and retaining the concepts zamestit' (replace), pomestit' (place, locate), razmestit' (distribute), smestit' (displace, move), sovmestit' (combine, join) and umestnyj (appropriate, in its place). Even the familiar word mešcanin (bourgeois, lower middle class) takes on a new coloring when it is identified with the root MEST. Frequent exposure to members of the same root family serves as a mnemonic device and thus helps ensure retention of the words.

An additional advantage of learning root structures is that students can see how words are coined to deal with new extralinguistic concepts--in effect legitimizing prefix-root correspondences that had not been accepted previously. For example, when a hoist device for ascending floors in a building was developed, a new word was needed. American English took the Latin form elevator, British English used the Germanic stem lift, and Russian borrowed the British word lift, but German used the auf (up) and zug (pulling) correspondence and called it Aufzug. In Russian, the process in combustion engines was described with the correspondence pere + gar (inter + burn) and pere + xvat were affixed to -čik (inter + seize + -or) to describe an interceptor aircraft.

The root approach can be handled with varying degrees of emphasis in the classroom. An instructor might simply tell his German or

Russian students, for example, that there are a number of useful root dictionaries or word family dictionaries for these languages in the college library, and let it go at that. Or, the instructor might dedicate some five to ten classroom hours per semester to such vocabulary-building activities as completion exercises (filling in blanks with missing prefixes or roots) or contextual guessing exercises (making educated guesses as to underlying meanings in extensive word family developments). There are a number of useful texts that contain extensive learning exercises in word building. There is enough variation in the material and procedures to prevent the exercises from becoming tedious.[3]

Instructors can make students aware of the word-building features of a language by bringing the various root reference works into the classroom and pointing out the lengthy and productive families. Language instructors who are sensitive to these features will always point out the presence of roots in new vocabulary words as they preview or explain these words to the students. A rapid oral review of previously learned words from the same word family is very helpful. In their efforts to alert students to the importance of ever-recurring roots, teachers may find it convenient to point out that all letters are not equal and that the heart of a long and ponderous word is often a root that consists of only three or four letters. Students can be urged to imagine that the three-letter root in oKAZyvat'sja (to turn out to be) is written in boldface letters and that the prefix and suffix are barely visible. Students' awareness of roots is often heightened by a request such as: "Give me the four letters that represent the root in oSTANavlivat'sja (stop)."

It is obviously very easy to guess the meaning of a new word if the prefix and root combine in a literal manner (A+B→AB), but somewhat more difficult if the combination results in an extended meaning (A+B→C). Because prefixes were originally prepositions--word particles that express spatial or temporal relations--it follows that the verbs of motion in both Russian and German are the easiest to decode. If one takes the German stem FAHREN (drive) and adds such prefixes as ab (from), an (on), auf (onto), aus (out), ein (into), fort (away), mit (with), um (around), zu (to), zurück (back), one has a resulting quantitative combination in which the basic meanings of both the prefix and the stem remain unchanged.

If all prefix-root combinations were to follow the A+B→AB model, there would be little value in calling attention to these combinations. A short discussion of quantitative combinations, however, is an excellent preparation for the more frequently found qualitative, or metaphoric, combinations (A+B→C). The transition from teaching quantitative to qualitative combinations can best be made by using a given family of verbs of motion as an example, and by showing how many words in such a family (e.g., GEHEN, to go) have both a literal and a figurative sense. For example, students will

readily see the following literal meanings on their own and will be able to appreciate the built-in metaphor in the corresponding figurative meanings:

	LITERAL		FIGURATIVE
ausgehen (to go out)	Anna ist ausgegangen. (Anna has gone out.)	ausgehen 1.(to end)	Gut wird das nicht ausgehen. (That will not end well.)
		2.(proceed from, start from)	Wenn wir davon ausgehen, dass... (If we proceed from the fact that...)
nachgehen (to follow, go after)	Du gehst vor, ich komme nach. (You go ahead, I'll follow.)	nachgehen 1.(to attend to, look after)	Er muss seinem Beruf besser nachgehen. (He must attend better to his job.)
		2.(pursue, investigate)	Er muss den Gerüchten über einen Diebstahl nachgehen. (He must investigate the rumors about a robbery.)
Übergehen (to go over, come over)	Horst ist in unser Lager übergegangen. (Horst has come over to our camp.)	Übergehen (to skip, omit, pass over)	Warum haben Sie mich übergangen? (Why have you skipped me?)
vorgehen (to go ahead, go before)	Du gehst vor, ich komme nach. (You go ahead, I'll follow.)	vorgehen 1.(to happen, occur)	Was geht hier vor? (What is happening here?)
		2.(take action, act)	Nächstes Mal wirst du schneller vorgehen müssen. (Next time you must act faster.)

These few examples are typical of hundreds of word families in both German and Russian that began as a simple enumeration of spatial relationships and that ended as a complex pattern of extremely diverse concepts. In German, for example, the word family

built on TRAG (carry) includes such concepts as business contract, membership contribution, ledger entry, suffering, letter postscript, peaceable disposition, lecture, and gossip.

The concept of 'common semantic denominator' may be introduced as a further step in making students aware of the importance of roots. Briefly stated, this denominator is the one constant--often difficult to translate--that is found throughout the development of an entire family. In the case of TRAG, above, the common semantic denominator is the concept 'carry.' A skillful teacher can demonstrate how Vertrag (business contract) can be interpreted as 'CARRY to each other,' Beitrag (membership contribution) as 'CARRY to the organization,' Eintragung (ledger entry) as 'CARRY to the bottom line,' ertragen (suffer) as 'ability to bear or CARRY pain,' Vortrag (lecture) as 'CARRY information to a public,' and Zuträger (gossip) as 'CARRY tales around to people.'

The Etymological/Mnemonic Approach

Mnemonic systems have been in use since the time of the Greek poet Simonides, circa 500 B.C. A mnemonic device connects the new item to be remembered with an item already existing in memory on one of the following bases: logical connection, similarity, contrast, or simultaneous occurrence. In the past centuries 'mnemonists,' or memory experts, have made intensive use of specialized mnemonic systems such as digit=letter, or visual+symbol. Variations on these systems are endless, and associations are often colorful or border on the outlandish. All mnemonic devices, however, share one goal: the implanting of an unfamiliar object, idea, or word form into short-term or long-term memory through an association with a familiar object.

The early stages of vocabulary learning present a natural body of material for the application of mnemonic systems. A growing number of language teachers no longer find it sufficient to have their students parrot each new word one time and then move on to the next. With increasing frequency, students are asking their instructors to give them associational links or 'mediators' to help them remember any new word that is not obviously recognizable from its English cognate. Language learners have used linguistic crutches for years in the form of bilingual puns or even random associations (e.g., "Think of a fat man named Mr. Sloane when you remember Rus. slon = elephant").

Those professors who are aware of etymological similarities between English and a list of new words in the target language can suggest nonrandom associations to the students instead of furnishing them with nonsensical 'Mr. Sloanes.'[4] Two types of etymological mediators have been found to be very effective in this regard: direct borrowings and loan translations.

Cognates and Direct Borrowings

This is the easiest type of mnemonic correspondence for the student to grasp. Similarities range from the obvious, where perhaps only one or two sounds have changed--e.g., Rus. gazeta (newspaper), gost' (guest), ěkzamen (exam), škola (school), universitet (university), muzyka (music), inžener (engineer), butylka (bottle)--to the much less obvious, where only an explanation of the phonological interchange of /ę/ and /ž/ would make the student aware of the derivational similarity (for example, Rus. žena [wife] from Gk. gunai [woman], based on the same Greek GYN root as 'gynecologist' and 'misogynist').

French and Spanish share a much greater number of formal similarities with English than do German and Russian. In the case of French and Spanish, however, the concept of 'false friends' (faux amis) must be pointed out, because there are many similar forms in the two languages that have totally different meanings:

French: verbs: déranger (disturb), prévenir (warn), agréer (accept), passer un examin (take an examination), rester (remain);

nouns: librarie (bookstore), drap (cloth), habit (dress), lecture (reading), toilette (attire), licence (licentiate's degree);

adjs.: actuel (present), commode (convenient), génial (inspired), gentil (kind), hardi (bold), large (wide).

Spanish: verbs: pretender (seek), prevenir (prepare), restar (remain);

nouns: injuria (insult), renta (income), rancho (camp), tráfico (trade), villano (peasant);

adjs.: simple (pure), versátil (changeable).

This list is by no means complete, but there are numerous language texts and review aids that call students' attention to these potential errors.

The great disadvantage of relying on direct cognates for memorizing vocabulary is that not all new words in a given introductory language text will have useful correspondences with English words. In fact, only 50 to 60 percent of commonly taught beginner's vocabulary items in Russian have a visible relationship with English. In German, this percentage is much higher because of the common Germanic ancestry of the two languages. The main advantage of using etymological mediators is that as students acquire an

appreciation of sound changes and phonetic correspondences, they begin to recognize relationships on their own.

Loan Translations

Loan translations are a step removed from the formal similarities of cognates. The borrowed word consists of semantic components that have been translated literally from the source language. For example, the English word 'skyscraper' is translated by native equivalents to become gratte-ciel in French, Wolkenkratzer in German (but 'cloud' rather than 'sky'), rascacielos in Spanish, and neboskrёb in Russian. Loan translations may be somewhat less valuable than cognates for mnemonic aids, but they still render great service. Many teachers neglect to point out the hundreds of loan translations found among the 3,000 basic words of German and Russian. When students learn that words can be translated by native forms as well as borrowed directly in the original, many additional correspondences with English become more apparent.

An excellent set of examples of loan translations are found in scientific vocabulary. German and Russian, for example, furnish a long list of chemical elements which seems rather forbidding until the student realizes that they are merely native equivalents of the component parts found in Latin and Greek. The word 'hydrogen,' for example, is formed from Gk. hydro- (pertaining to water) and gen (generating). Ger. Wasserstoff is also Wasser (water) + Stoff (matter). In a similar manner, Rus. vodorod is voda (water) + rod (generating). The English word 'oxygen' is formed from Gk. oxy (bitter) and gen, since the discoverer of oxygen, Joseph Priestley, erroneously thought that the newly isolated gas produced a bitter odor. Ger. Sauerstoff and Rus. kislorod use the similar image of Ger. sauer or Rus. kisl (bitter) combined, respectively, with Stoff and rod.

Although this paper has drawn most examples from French, Spanish, German, and Russian, some mention should be made at this point about an interesting way to use loan translations in teaching Latin and Greek vocabulary. If the Latin or Classical Greek student is sufficiently motivated to acquire a good reading knowledge of these languages, then a certain reverse logic can be applied. A conventional argument for learning Latin and Greek is that the vocabulary learning task is easy, since a great many English words are borrowed from these languages. Knowledge of English helps in learning Greek in the early phases; conversely, Greek can very often help increase a student's command of English at the more advanced levels, since many Greek and Latin words learned at the more advanced levels of study have English cognates that are little known or highly technical.

For example, the following Greek nouns have little-known English cognates: echis (viper) [Eng. 'echidna', type of burrowing mammal],

ofis (snake) [Eng. 'ophidian,' snakelike], lupē (grief) [Eng. 'lypemania,' melancholy], sthenos (strength) [Eng. 'asthenia,' loss of bodily strength], siōpē (silence) [Eng. 'aposiopesis,' rhetorical device: a dramatic breaking off of a thought in the middle of a sentence], chthon (ground; country) [Eng. 'autochthonous,' native, aboriginal, indigenous], and many more. It is unlikely that the student of Greek is already familiar with these English words. However, mnemonic associations can be applied here as well if students attempt to learn these new English words at the same time that they learn their Greek equivalents. It is always a joy to have Latin or Greek students express amazement at a later point in their studies when they realize that great numbers of scholarly words in English are recognizable from their Latin or Greek equivalents.

Productive use of loan translations, or 'calques,' as mnemonic devices can be made through classroom models. Modern European languages very often borrow an entire Latin or Greek word family and translate the Latin or Greek prefix and root combinations by means of their own prefix and root equivalents.

The Latin word family DUC provides an excellent example of a calque in English, Russian, and German:[5]

English	Russian	German
(from Latin)	(on Latin model)	(on Latin model)
-duce -duct	-vod	-führ-
conduct	vodit'	führen
introduce	vvodit'	einführen
deduce	vyvodit'	(ableiten)
adduce	privodit'	anführen
produce	proizvodit'	vorführen
reduce	svodit'	zurückführen

As the German word ableiten listed above indicates, not all languages give a perfect or faithful reproduction of the complete Latin word family. Individual calques across languages are even more plentiful than word family calques. The following example gives but a minuscule selection of calques formed from various Latin roots that have parallel loan translations in English, French, German, and Russian:[6]

English	French	German	Russian
introduce	introduire	einführen	vvodit'
include	inclure	einschliessen	vključit'
coincide	coincider	zusammenfallen	sovpadat'

In this section I have tried to point out how both loanwords and loan translations offer students a built-in mnemonic device. Teachers who point out the formal similarities between the target language and the native language will save their students the need to create nonsense rhymes or farfetched 'trigger words' and will help them recognize cognates.

It must be emphasized that classroom implementation of all these approaches requires devoting a certain amount of time to formal vocabulary per se. Even though the root and the etymological/mnemonic approaches do not apply to all new words, they still have great merit in that they offer students unusual information on vocabulary that they would not find readily available in all beginning language textbooks.

The following section on the Topical Vocabulary Checklist will present an approach that is designed to bring order into the normally random manner of encountering new vocabulary units. The two procedures previously described are directed toward learning individual vocabulary words by using elements inherent in the word forms themselves or in their etymology. Although the third procedure treats learning individual words as well, it attempts to provide in a systematic fashion an overview of the vocabulary required for a given level or desired goal.

The Topical Vocabulary Checklist

The Problem

Studies have indicated that the ability to recognize 7,000 words is sufficient to cover most everyday situations, and that the capacity to use 3,000 words actively is a workable minimum for meeting one's expressive needs.[7] The statistical section of The American Heritage Word Frequency Book shows that the 7,000 most frequently used words in the English language will occur five times or more in a randomly encountered set of 1,000,000 words.[8] Since a student must devote two or three years of study to mastering a language, learning such a large number of vocabulary items is not a problem in itself. There are two problems in the efficiency of the process, however: students encounter each of the 7,000 words in an unordered, random manner; they have no indication of how much they have already learned or how much remains to be learned.

Except for series where related concepts are learned as units (days of the week, months of the year, numbers, etc.), students may encounter each new word in a language text in a haphazard order. Even first-year texts that claim to present the 1,000 or 2,000 most

frequent words of a language differ widely in their selection of vocabulary.[9] A reading passage on HOUSE, for example, may have several words on FOOD, BODY, and HEALTH. A passage on MUSIC would probably not be limited to that topic, but could also include words from the categories of MIND, FEELING, and COMMUNICATION.

Research in verbal learning demonstrates that it is much easier to learn a word in a categorized list--e.g., Ger. Bucht (bay) among See (lake), Meer (sea), Fluss (river), Hafen (harbor), Küste (coast), Strand (beach)--than in a semantically unordered list such as Buch (book), Buche (beech tree), Büchse (box), Buckel (hump). When actually using the language, students will encounter a word in a meaningful context; for this reason, they should also have the benefit of a topical arrangement in their review. In a list of unordered foreign words the learner is constantly shifting mental gears as each new word calls to mind an image of a new object. It is far more efficient and instructive to run one's eyes down a column of words that share a common semantic classification.

Students who hope ultimately to recognize 7,000 words would benefit greatly from an indication of their progress and an overview of the entire system. Many students who have diligently mastered 1,000 beginning-level words feel that they already know a great deal of the language and are surprised when they continue to encounter new commonly used words. Students become discouraged when they see no recognizable end to the learning process, and when they have no way of assessing their progress. Many students abandon language studies after one or two years with the notion that it is impossible to learn a language in a reasonable amount of time. Others never attempt to learn a language at all because of a mistaken impression of the awesome number of words that must be memorized as part of an alien code.

The Checklist

Declining language enrollments dictate that a solution to this problem must be found. The key to providing order in vocabulary instruction is to divide 7,000 vocabulary items into manageable categories and subcategories. This writer is now working on a checklist in English of all words that students are likely to encounter in their language studies. This list will be divided into topical categories (see Appendix B). Each entry will include an indication of the frequency of that word. For most efficient use, the list might be printed in several versions: a complete list of 7,000 words; a beginner's list of 2,000 words; and an intermediate student's list of 4,000 words. There will also be blank spaces at the end of each topic for words not covered by the lists and an alphabetical index. The checklist could serve as a type of workbook with a place for students to write each new word as they encounter it in their language classes or in their independent

reading. Because the list is in English, it could be used uniformly for all European languages.

The best source of words for such a checklist is Helen S. Eaton, An English-French-German-Spanish Word Frequency Dictionary.[10] This work is a composite of frequency studies in the four languages and provides fairly complete coverage of all topical specialties. It is a dictionary of meaningful words, not a listing and counting of computerized word forms.[11] The great advantage of Eaton over computerized word lists is that by virtue of the translations, parts of speech and--if appropriate--multiple meanings are indicated for every word. The 6,500 words in the main part of the study can be divided into approximately 3,500 nouns, 1,500 verbs, 1,300 adjectives, and 200 adverbs. Nouns are the easiest to classify because they denote either concrete objects or easily comprehensible abstract concepts. Verbs, adjectives, and adverbs are listed under the appropriate noun category.

One of the few major problems in establishing a concept-oriented topical vocabulary checklist stems from the fact that each language has differing ranges in the denotations of its basic word concepts. Some graphic examples of this are Rus. ruka for both 'hand' and 'arm'; Rus. noga for both 'foot' and 'leg'; Fr. doigt for both 'finger' and toe.'

Very often the sum of a set of words from two diverse cultures will have the same denotation, but the subdivisions of the set will not be equal. For example, in many European and American cultures three meals a day are served, but the definition of the individual members of the set 'breakfast-lunch-dinner-supper' varies extensively in terms of the size of the meal, its preparation (hot or cold), and the time of serving. There are 24 hours in every day, and yet the times and lengths of the following subdivisions vary from language to language: 'morning,' 'afternoon,' 'evening,' 'night.' In fact, Russian does not have a commonly accepted form for 'afternoon,' and while French and German do have a word for it (après-midi, Nachmittag), they have no equivalent for the greeting 'Good afternoon.' In Spanish, the same word is often used for both 'afternoon' and 'evening' (tarde), and noche can be used for both 'evening' and 'night.'

It is also important to bear in mind the fact that any attempt to analyze a specific language's categorization of reality must take into account the fact that each language is in a constant state of change--continually adding new words to its inventory and changing the meaning of older words.

If the English words selected to represent concept groups are kept general, and if the users of a list are prepared to accept blank spaces for some English concepts (Rus. 'afternoon,' Ger. 'frustrated') and the necessity to enter several foreign words for some

other concepts ('cousin': Ger. der Vetter, die Cousine; 'return': Fr. revenir, retourner, rentrer, renvoyer; 'box': Ger. die Schachtel, die Schatulle, der Kasten, die Kiste, das Kästchen, das Etui, das Futteral, der Karton, der Koffer, die Dose, die Büchse), they will see that these English concepts are neither absolute nor universal.

All useful sets must appear in a topical list, but the component members of these sets should be stated in a general manner, since foreign languages rarely have equivalents for all members of a set of objects. An example of such a series or set is ROAD, where not every foreign culture can match each individual member of the set: 'path,' 'alley,' 'lane,' 'way,' 'street,' 'road,' 'avenue,' 'boulevard,' 'highway,' ' expressway/freeway/interstate.' COAT/JACKET is another English set with overly specific subdivisions: 'overcoat,' 'topcoat,' 'frock coat,' 'coat,' 'car coat,' 'suit coat,' 'field jacket,' 'lumber jacket,' 'windbreaker/anorak,' 'suit jacket,' etc. A series list is more useful when the subdivisions are of a more general nature ('overcoat,' 'coat,' 'field jacket,' 'suitcoat'). It is also helpful to suggest that the user seek cultural correspondences or equivalents rather than exact translations.

The only real disadvantage of an 'English only' concept list is that it will not have a specific entry for the many unique aspects of a foreign culture. Here again, judicious amounts of blank space after each subheading would permit the student to catalog such culturally unique words as Sp. tamale, taco, enchilada, chili; Rus. vodka, borščč, šči, kolbasy, zakuski. No concept list or implied division of reality could ever claim to be complete.

A topical listing reduces large categories to manageable levels. If each word has its own frequency 'identity,' students could set intermediate goals on their own, even if they were using the full 7,000-word version of the list. They could exercise their own judgment as to which subcategories would be most useful to them. It is obvious that the names of berries, grains, trees, and birds are not high frequency words, and that 'eyelid,' 'eyebrow,' 'temple,' 'nostril,' 'knuckle,' 'knee,' and 'ankle' are definitely less important than 'head,' 'eye,' 'nose,' 'finger,' 'leg,' and 'foot.' It would be very difficult for students, however, to determine which abstract nouns were more important than others, and which verbs and adjectives should be learned before others. A frequency number next to each word would give students a feeling for the relative importance of that particular word. For example, "soldier . . . 29" or "wolf . . . 30" would indicate that 'soldier' occurs at rank 2,900 and 'wolf' at rank 3,000 in a list of 7,000 words. Individual frequency notations would also help ease the arduous process of learning and reviewing large numbers of foreign words. The shorter versions of the list mentioned earlier (2,000 words and 4,000 words) would be a morale booster in that they would establish intermediate stages of proficiency--subgoals that would give students a sense of

accomplishment when they had mastered them. As students used the list, they would see that the vast complexity of reality is much more easily comprehended in a foreign language if its word forms are arranged according to workable categories. Even if students encountered new foreign vocabulary items in an unordered or 'flash card' sequence, they could write them down under ordered topics and compare them with the semantically related words they already know.

The complete and intermediate versions of the checklist would indicate to students a visible end to the process of mastering a foreign language and enable them to monitor their progress in attaining fluency in that language. Students would have a clear view of how much they know and how much remains to be learned. Without this perspective, the learning process would entail mastering 7,000 unordered words.

The topical checklist would also be useful for vocabulary review. As students checked off items that they had mastered in a specific category, they would be encouraged to learn the remaining words, especially when they had already learned 70 or 80 percent of the words relating to that topic.

Students with a knowledge of their own vocabulary strengths and weaknesses would be much better able to participate in speaking and conversation exercises; they would recognize those areas in which they were most competent and those in which they must paraphrase their thoughts in order to be understood.

The world of languages is exciting, and study of a foreign language opens new cultural spheres for students who are willing to look beyond their native language. It cannot be denied that there are many elements of routine in language study and that vocabulary acquisition can at times sink to a level of drudgery where students feel they are simply memorizing meaningless 'code words' in French or German for the 'real words' of English. Proper vocabulary presentation in the classroom can go a long way toward alleviating this problem, and vocabulary expansion can be a vital and fascinating part of daily activities in the language classroom.

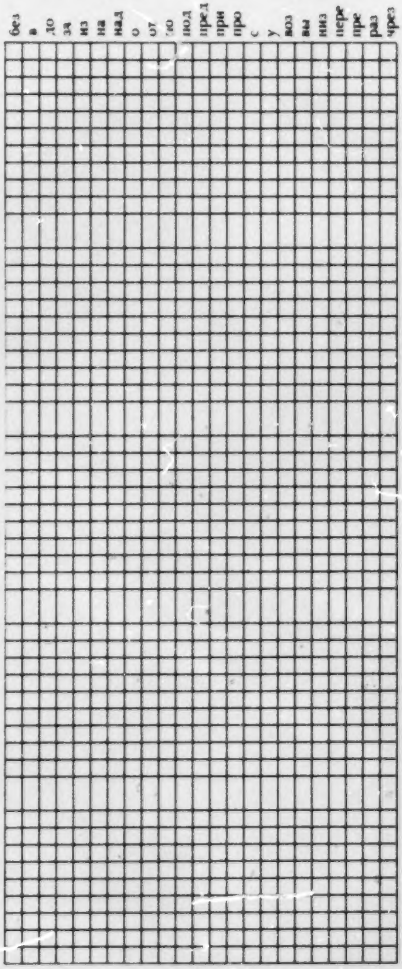
APPENDIX A

Sample Prefix-Root Matrices

The following matrices are not intended to account for each individual Russian or German word. The matrices are intended to demonstrate productivity of word families by showing the student how such a framework could account for individual words at the various prefix-root junctures. The matrices do not show the various suffixes with which each prefix-root combination may combine. In addition, the prefix columns do not show double and triple prefix constructions, e.g., Ger. sich HIN UNTER BE geb en (to go down), Rus. NA BEZ OB raz nicat' (to make a nuisance of oneself).

MATRIX OF RUSSIAN PREFIX AND ROOT COMBINATIONS [12]

(Some 50 productive roots are given for reference.)



MATRIX OF GERMAN PREFIX AND ROOT COMBINATIONS

	antwort arbeit bau bild	brech bring deck denk	druck ein fahr fall	fang find flieg forder	führ geh greif	halt hang heb hör	kehr komm lang lass	lauf leg mal nehm	rat rech n
ab an auf aus									
be bei									
da dar durch ein									
ent/emp er erz fern									
fort für ge gegen									
her hin hinter in									
los miss mit nach									
neben nieder ob ober									
rück über übrig um									
un unter ur ver									
voll von vor vorder									
weg weit weiter wider									
wieder zer zu zurück									
zusammen zwischen									

MATRIX OF GERMAN PREFIX AND ROOT COMBINATIONS *cont'd*

	r_d r_tt richt ruf	sag satz schick schieb	schiess schlag schliess schreib	seh setz sicht sinn	sitz sprech stand steh	steig stell stimm teil	trag treib tu wahr	wander weg weis werf	zahl zeich n zieh
ab an auf aus									
be bei									
da dar durch ein									
ent/emp er erz fern									
fort für ge gegen									
her hin hinter in									
los miss mit nach									
neben nieder ob ober									
rück über übrig um									
un unter ur ver									
voll von vor vorder									
weg weit weiter wider									
wieder zer zu zurück*									
zusammen zwischen									

APPENDIX B

Topical Vocabulary Checklist

Sample Division of 45 Categories

The first word (or words) in each category indicates the general topic. In this overview, they do not suggest every possible word in a particular category.

1. world
   the country
   mountain
   water
2. agriculture
   crops
3. city
   store, shop
   castle, palace
4. weather
5. mineral
   metal
   element
6. animal (domestic)
   animal (wild)
7. bird
8. fish
9. insect
10. tree, plant, flower
11. time
    day
    calendar
12. profession, occupation
13. administration
    management
    technique
14. person
    friend
15. family
16. life
17. food, meal
    bread
    meat
    vegetable
    fruit
    dessert
    drink
18. dwelling, residence
    house
    living room
    dining room
    kitchen
    bedroom
    bathroom
19. machine
    tool, implement
    box, container
20. clothes
    suit
    dress
    cloth
    sewing
    jewelry
    costume
21. body
    head
    trunk
    limbs
    organ
22. sickness
    hospital
23. luck, chance
    success
    failure
    misfortune
24. mind, intellect
25. feeling, sense
    mood
    love
    care, worry
    sorrow
    honor, respect
    hate, hatred
26. education
    school
    subjects of study
27. science
28. culture
    painting
    sculpture
    theater
    music
    musical instrument
29. literature
30. language
31. communication
    conversation
    truth, lie
    answer
    discussion
    sign, symbol
32. writing
    book
    newspaper
    letter

33. religion
church
worship, religious services
clergy
marriage
funeral
superstition

34. company, society
way of life, habit, custom

35. club, association
hospitality
gift, present

36. hobby
toy
sport
riding, hunting
cards, chess

37. trip, journey
holiday, vacation
transportation
train, bus
automobile
ship, shipping
airplane

38. country, nation
government
monarchy
election
congress, legislature
revolution

39. law
court
crime, prison

40. economy
money, finance
bank

41. war
weapon, arm
Army, Navy, Air Force
officer
military unit
navy ship

42. part, top, bottom
point, space, place
direction

43. number, quantity
measurement

44. act, deed
motion

45. thing, object
matter
manner, way
quality, characteristic
cause, effect

NOTES

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1. See Richard Newnham, About Chinese (Baltimore: Penguin Books, 1971) for a more detailed description of this process.

2. Dean S. Worth, Russian derivational dictionary (New York: American Elsevier, 1970); Catherine A. Wolkonsky, Handbook of Russian roots (New York: Columbia University Press, 1961); Howard H. Keller, German root lexicon (Coral Gables: University of Miami Press, 1973) and German word family dictionary (Berkeley and Los Angeles: University of California Press, 1978). There are no widely published works currently in print on the root systems of French, Spanish, Latin, or Greek.

3. See, for example, A-LM Russian, level one and level two (Harcourt, 1971); Walter F.W. Lohnes and F.W. Strothmann, German: a structural approach (Norton, 1973); and Charles Duff, Spanish for beginners (Barnes and Noble, 1958). Several excellent works that have lengthy sections devoted specifically to vocabulary expansion using a prefix/root approach include Magda Ferenbach, Wörter zur Wahl (Stuttgart: Ernst Klett, 1971); Zdravka Mečkova, Übungsbuch zur deutschen Lexik (Sofia: Nauka, 1974); Charles E. Gribble, Russian root list with a sketch of word formation (Slavica, 1973); Z.A. Potixa, Sovremennoe russkoe slovoobrazovanie (Moscow: Prosveščenie, 1970); D.E. Rosenthal, Practical stylistics of Russian (Moscow: Progress, 1972).

4. It should be noted here that there is research that indicates that students may remember word associations better when they provide them themselves. Teachers should encourage their students to make their own mnemonic links as well.

5. Charles E. Townsend, Russian word formation (New York: McGraw-Hill, 1968), 19.

6. Ibid., 122.

7. Robert Lado, Language teaching: a scientific approach (New York: McGraw-Hill, 1964), 117.

8. John B. Carroll, The American Heritage word frequency book (New York: American Heritage Publishing Co., 1971).

9. Nicholas P. Vakar, Statistical methods in the analysis of Russian, Slavic and East European Journal 11 (1967), 59-65.

10. Helen S. Eaton, An English-French-German-Spanish word frequency dictionary (New York: Dover, 1961).

11. Many of the recent computerized word frequency dictionaries are forced to regard a word as any set of letters (or marks) bounded at the beginning and at the end by a blank space. Thus, as far as the computer is concerned, the following are all separate words, each with its own frequency count: 'walk,' 'Walk,' 'walk's,' 'walking,' 'Walking,' 'walker,' 'Walker'; 'One,' 'ONE,' 'one-,' '1.'

12. Howard H. Keller, The role of a common semantic denominator in Russian root structures, Russian Language Journal 96 (Winter 1973), 102.

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